SYNOPSIS OF THESIS

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"EFFICACY OF AN INTEGRATIVE EXPOSURE RESPONSE PREVENTION INTERVENTION ON COERCIVE DISRUPTIVE BEHAVIOUR IN CHILDREN AND ADOLESCENTS WITH OBSESSIVE-COMPULSIVE DISORDER"

BY

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STATE OF ART

Obsessive-compulsive disorder is a disabling psychopathology characterised by intrusive, distressing thoughts and/or repetitive physical or mental acts which negatively impact functioning and quality of life (Gragnani et al., 2022). It is a chronic illness affecting 1-3% of the general population (Ruscio et al., 2010).

Pediatric obsessive-compulsive disorder is common in children and adolescents. The illness's presentation and course are heterogeneous (Heyman et al., 2001).

Coercive/Disruptive behaviour refers to situations in which a child or adolescent with OCD attempts to impose rules and prohibitions on others, particularly family members, because of his/her disorder. Coercion can include the accommodation of rituals or a forced participation in them, demands to perform actions instead of the child or to refrain from certain behaviours because they cause the child OCD distress, and compulsive behaviours on the part of the child that negatively impact others. The most common symptom dimension associated with coercive behaviour is contamination/washing. Other dimensions commonly identified are symmetry/ ordering and harm checking. Less commonly indicated are hoarding and sexual or religious obsessions and related checking compulsions. (Lebowitz et al.2011).

Patterns of coercive behaviour aim to impose symptom accommodation on family members, which are consistently tied to greater severity and poorer treatment outcomes in OCD (Lebowitz et al. 2011; Caporino et al. 2012). When met with resistance to these demands, much affected youth respond with physical aggression or verbal abuse (Lebowitz et al. 2011; Storch et al. 2012). Mothers are identified as the most frequent targets of such coercive behaviours (Lebowitz et al., 2011b), although fathers and siblings are reportedly common targets as well. Coercive–disruptive behaviour is associated with more severe OCD symptoms in the youth. The severity increases the degree to which family members become involved with the child's symptoms, leading to adverse family outcomes and heightened conflict responsibilities (Storch et al., 2007; Peris et al., 2008). Coercive behaviour can also lead to increased distress in the parent (Lebowitz et al., 2011,2015; Storch et al., 2012).

The transdiagnostic trait characteristics theorised to influence OCD prospectively are emotional dysregulation: difficulty modulating emotions in response to internal and external demands; intolerance to anxiety (IU): dispositional inability to manage lack of sufficient information; anxiety sensitivity (AS): perceived anxiety symptoms as intolerable or dangerous,

resulting in maladaptive ritualistic behaviour and enhancing hypervigilance to anxiety or distress, which are likely to occur at greater intensities for longer duration (Fang et al., 2021)

CBT is a clinical-based intervention designed to reduce the symptoms by behavioural management of a child's OCD symptoms with differential attention, along with modelling and scaffolding (Jester et al., 2005). Exposure response prevention (ERP) is an effective treatment delivered in multiple formats, which involve not engaging in the behaviour once the obsessions have been triggered (Olatunji et al., 2013; Koran et al., 2007).

REVIEW OF LITERATURE

Coercive Disruptive Behaviour

Coercive disruptive behaviour (CDB) in OCD represents a vital domain that warrants attention during treatment. Coercive behaviour is often expressed verbally (e.g., swearing, making threats) and/or physically, such as hitting, grabbing, and menacing. (Storch et al. 2012). The coercive behaviour might also be present as 'emotional blackmail' through displays of extreme emotional/ physical distress such as crying or screaming (Lebowitz et al., 2011). Research states that CDB is a common occurrence among youth with OCD, estimating that coercive behaviour occurs in at least 25% of paediatric cases with OCD (Lebowitz et al., 2011). Cognitive behaviour therapy (CBT) with Exposure response prevention (ERP) is a promising treatment for reducing symptom severity (Freeman et al., 2014). Though CBT and ERP are effective, 40% of children do not show remission (Riise et al., 2016). One of the identified factors affecting treatment response includes family accommodation (Storch et al., 2007; Peris et al., 2017; Mc Guire et al., 2015)

Coercive disruptive behaviour and family accommodation

Family accommodation is when family members assist or participate in the patient's rituals (Grover et al., 2011). More than 95% of OCD patients' families accommodate the patients' OCD rituals by providing reassurance, participating in compulsive behaviours, waiting for ritual completion, or avoiding OCD triggers (Stewart et al., 2008). Though a sense of relieving distress and a successful coping measure in the short run, it eventually results in a vicious cycle in which patients become more likely to engage in avoidance or compulsive behaviours, and hinder them from developing more adaptive appraisals and behaviours to cope with their OCD-related distress in the long run" (Wu et al., 2016). Evidence shows that family accommodation

is associated with poor treatment outcomes, and this association is also observed between exposure response prevention (ERP), a type of CBT, and accommodating behaviours known to counteract treatment efficacy (Albert et al., 2017). OCD has been reported to respond positively to the treatment in the short term but has a high relapse rate (Blotch et al., 2013; Eisenet al., 2013). Therefore, including the family in learning about family accommodation and capacitating them with the necessary coaching skills to guide ERP should have a positive impact on the sustainability of treatment effects in patients with OCD. Studies conducted indicate that a decrease in CDB predicted positive changes in OCD. It states that 10-12 weeks of cognitive behavioural therapy treatment and psychoeducation for the family members (to understand the cycle of OCD and reduce family accommodation) can successfully reduce symptoms, leading to meaningful improvement in child and family functioning. (Schuberth et al.2018; Jacoby et al. 2021)

Coercive disruptive behaviour and child and parental distress

Youths view coercive behaviour as avoiding distress or expressing frustration when parents do not yield to OCD-related demands (Furukawa et al., 2008). Studies indicate that children who do not improve in their ability to tolerate distress might sabotage exposure tasks to continue reinforcing their symptoms. They may also resist engaging in exposure tasks and show slower progress towards therapy. The transdiagnostic trait factors like anxiety sensitivity, intolerance to uncertainty, and emotional dysregulation prospectively influence the OCD outcome. Longitudinal mediation analyses have revealed that coping strategies result in better resilience and may prospectively reduce OC symptoms in the long run (Fang et al., 2021). Another study indicated that resilience factors were correlated to the bolstering of mental health among individuals with and without psychopathology during sustained and unprecedented periods of stress (Hezel et al.,2022).

Parents are likely to accommodate as they believe it will prevent loss of behaviour and emotional control (Meyer et al., 2017). The distress experienced by parents depends on multiple factors, such as a parent's perception of threat or a parent's tolerance of their distress, which may be utilised in their ability to tolerate seeing their child's distress. Finally, greater external manifestations of distress by the child, such as crying and disruptive behaviours/rage common to paediatric OCD (Lebowitz et al., 2011,2015; Storch et al., 2012), could make tolerating distress more difficult for parents. Considering these factors, it seems likely that over time, poor parental tolerance of child distress may be reinforced, like that of the child's, through the

parent's use of avoidant or escape behaviours. Parents with low tolerance of child distress may also be more likely to give in when children exhibit distress as well as have difficulty setting limits, which might then reinforce the child's use of avoidant and distress-related behaviours (e.g., crying, tantrums). Studies indicate that improvement of distress tolerance in parents is associated with considerable improvements in outcome, particularly for children who appear slow in improving their distress tolerance.

Coercive disruptive behaviour and family dynamics

Family variables are associated with family accommodation in paediatric OCD; family conflict is correlated with worse childhood outcomes when parents refuse to accommodate symptoms. A family environment high in interpersonal conflict or a tendency toward aggressive behaviour can make resisting demands for accommodation considerably more complex (Lebowitz et al., 2011). While family dynamics such as cohesion and conflict have not been linked to accommodation, higher cohesion has been linked to attenuated parental distress and fewer consequences of not accommodating, and family conflict was linked to worse consequences when refraining from accommodation (Peris et al., 2008). Poor youth distress tolerance and resistance to recognising and addressing OCD may hinder the family's abilities to effectively support the youth (Selles, Franklin et al., 2018; Selles et al., 2019). Parents may also accommodate or become antagonistic in the "heat of the moment" when faced with challenging oppositional, coercive, and disruptive behaviours (e.g., rages, manipulation) that can emerge when OCD-affected youth are distressed (Flessner et al., 2011; Lebowitz et al., 2011; Lebowitz et al., 2015; Schuberth et al., 2018; Storch et al., 2012). Antagonistic responses to OCD (high expressed emotions, criticism, and blame are also common among OCD-affected relatives (Peris et al., 2012). Associated with the belief that the symptoms are within the OCD-affected individual's control (Renshaw et al., 2005), hostile responses may also be driven by well-meaning intentions and short-term benefits (Chambless et al., 1999). However, as youth fail to control OCD symptoms, negative parental responses may escalate over time, eroding family cohesion and contributing to greater symptom severity and increased family disruption (Peris et al., 2008; Peris, Sugar, et al., 2012; Peris Yadegar et al., 2012). Despite their contrasting differences, accommodating and antagonistic responses are often related within families (Peris et al., 2008; Renshaw et al., 2005). Family factors like cohesion are potentially viewed as protective factors that predict lower family accommodation levels. Interventions promoting a positive family climate are seen as protective factors in treating paediatric OCD (Peris & Piacentini, 2013).

Recent advances

Recent advances have focussed on using third-wave therapies as a stand-alone measure or integrating them with ERP. Several 'third wave' therapies (e.g., Acceptance and Commitment Therapy, Mindfulness-Based Cognitive Therapy) have an emerging and encouraging evidence base in OCD. MBCT with ERP has been shown to reduce self-reported OCD symptoms (Hertenseten et al., 2012). In ACT/ERP hybrid studies (Capel et al., 2022; Twohig et al., 2018; Wheeler, 2017), there is consistency in exposures being adapted to reflect participants' values and adaptation of monitoring during exposures to be willing to experience discomfort. Studies on DBT also state that increasing distress tolerance skills may allow an individual with OCD to be better able to tolerate exposure and resist urges to engage in compulsions. Some argue that distress tolerance skills should be taught to patients doing exposure therapy. However, the number, length, and duration of treatment sessions of an adequate trial (standalone, hybrid, and sequential) vary considerably. Though adaptations of third-wave therapies are seen to be efficacious for OCD, few studies include follow-up assessments.

PROBLEMS TO BE INVESTIGATED

The present research aims to study the efficacy of an Integarive Exposure Response Prevention Intervention in children and adolescents with obsessive compulsive disorder and to assess the applicability of the module on coercive disruptive ebhaviour, severity of the illness, anxiety, depression, resilience and family accommodation.

OBJECTIVES

Primary objectives

a) To develop an integrative exposure response prevention therapy programme for the improvement of coercive disruptive behaviour and severity of OCD for children and adolescents with obsessive-compulsive disorder

b) To assess the efficacy of Integrative Exposure Response Prevention Intervention for change in severity of coercive disruptive behaviour in children and adolescents with obsessive-compulsive disorder as compared to children and adolescents receiving only exposure response prevention therapy.

Secondary objectives

a) To assess the efficacy of Integrative Exposure Response Prevention Intervention for change in the overall severity of OCD in children and adolescents as compared to the group of children and adolescents receiving only exposure response prevention therapy.
b) To assess the efficacy of Integrative Exposure Response Prevention Intervention for change in overall severity of anxiety in children and adolescents with obsessive-compulsive disorder as compared to children and adolescents receiving only exposure response prevention therapy.
c) To assess the efficacy of Integrative Exposure Response Prevention Intervention for change in overall severity of depression in children and adolescents with obsessive-compulsive disorder as compared to children and adolescents receiving only exposure response prevention therapy.
d) To assess the efficacy of Integrative Exposure Response Prevention Intervention for change in overall resilience in children and adolescents with obsessive-compulsive disorder as compared to children and adolescents receiving only exposure response prevention therapy.
e) To assess the efficacy of Integrative Exposure Response Prevention Intervention for change in severity of family accommodation in children and adolescents with obsessive-compulsive disorder as compared to children and adolescents receiving only exposure response prevention therapy.
f) To assess the association of baseline demographic and clinical variables with outcome variables of children and adolescents with obsessive-compulsive disorder receiving Integrative exposure response prevention intervention as compared to the group receiving only exposure response prevention.

MOTIVATION FOR STUDY

OCD is associated with marked functional impairment in children and significant family burden and distress (Amir et al., 2000). Cognitive behaviour Therapy with Exposure Response Prevention is an evidence-based and one of the frontline treatments for OCD. Despite the benefits, many youths maintain residual symptoms and functional impairments at treatment completion (Barret et al., 2008; Storch et al., 2008.) Factors affecting treatment response identified are family accommodation, risk factors in children, tolerance of distress, etc.

Childhood-onset OCD may pose a particular risk for family accommodation due to the natural reliance of children on their parents for assistance and reassurance and due to parents' willingness to sacrifice to avoid children's anger or distress (Waters & Barrett, 2000). Parents, driven by the need to restore peace to the home, alleviate their child's self-distress, or allow ongoing family routines to proceed, may accommodate their child's obsessive-compulsive needs in various ways (Lebowitz et al., 2014).In addition, children impose symptom accommodation on family members, which is consistently tied to greater severity and poorer treatment outcomes in OCD. Studies indicate that poor tolerance to distress in children with obsessive-compulsive behaviour, in addition to family accommodation, might sabotage exposure tasks, continuing the reinforcing of symptoms. They may also resist engaging in exposure tasks and show slower progress towards therapy. Although current forms of treatment are available for the treatment of coercive behaviour in obsessive-compulsive disorder, there is a presence of high rates of dropout and even financial limitations. Short-term therapy is required to meet the group's needs, especially for individuals with scarce monetary resources. It also minimises the chance of therapy ending prematurely. The integrative treatment for children with coercive behaviour in obsessive-compulsive disorder includes building resilience in children to cultivate motivation and detachment for exposure response prevention and an overall reduction in symptoms.

HYPOTHESES

a) Integrative exposure response prevention intervention will be applicable in children with obsessive-compulsive disorder for the improvement of coercive disruptive behaviour and severity of OCD
b) There will be no significant difference in outcome measure of severity of coercive disruptive behaviour at pre-intervention, post-intervention, and one-month follow-up between the study group receiving the Integrative ERP and the study group receiving only ERP.
c) There will be no significant difference in outcome measure of severity of illness at pre-intervention, post-intervention, and one-month follow-up between the study group receiving the integrative ERP and the study group receiving only ERP.
d) There will be no significant difference in outcome measure of anxiety at pre-intervention, post-intervention, and one-month follow-up between the study group receiving the integrative ERP and the study group receiving only ERP.

e) There will be no significant difference in outcome measures of depression at pre-intervention, post-intervention, and one-month follow-up between the study group receiving the integrative ERP and the study group receiving only ERP.

f) There will be no significant difference in outcome measure of resilience at pre-intervention, post-intervention, and one-month follow-up between the study group receiving the integrative ERP and the study group receiving only ERP.

g) There will be no significant difference in outcome measures of family accommodation at pre-intervention, post-intervention, and one-month follow-up between the study group receiving the integrative ERP and the study group receiving only ERP.

h) There will be no association of baseline demographic and clinical variables with outcome variables of children and adolescents with obsessive-compulsive disorder receiving Integrative exposure response prevention intervention and only exposure response prevention.

Primary Outcome Variable

1. Reduction of the severity of coercive disruptive behaviour

Secondary Outcome Variables

1. Severity of obsessive-compulsive behaviour

2. Anxiety

3. Depression

4. Resilience

5. Family accommodation

OPERATIONAL DEFINITIONS OF VARIABLES:

Outcome Variables:

Primary outcome variables

- **Coercive Disruptive Behaviour**: Coercive/Disruptive behaviour refers to situations in which a child or adolescent with OCD attempts to impose rules and prohibitions on others, particularly family members, because of his/her disorder. Coercion can include the accommodation of rituals or a forced participation in them, demands to perform

actions instead of the child or to refrain from certain behaviours because they cause the child OCD distress, and compulsive behaviours on the part of the child that negatively impact others (Liebowitz et al., 2011). This has been measured by Coercive disruptive behaviour Scale for paediatric OCD (CD-POC): Lebowitz et al. (2011)

Secondary outcome variable

- **Obsessive-compulsive disorder:** Obsessive-compulsive disorder is characterised by intrusive, distressing thoughts and/or repetitive physical or mental acts which negatively impact functioning and quality of life (Gragnani et al., 2022). This has been measured by Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS): Goodman et al. (1989); Scahill et al. (1997)
- **Anxiety**: Anxiety is an emotion which is characterised by an unpleasant state of inner turmoil and includes feelings of dread over anticipated events (Davison GC., 2008). This has been measured by State-Trait Anxiety Inventory for Children (STAIC): Spielberger et al. (1973)
- **Depression:** Depression is a mood disorder characterized by at least two weeks of pervasive low mood, low self-esteem, and loss of interest or pleasure in normally enjoyable activities (Spitzer et al., 1975). This has been measured by Children's depression inventory (CDI) Kovacs (1984)

- **Resilience**: Resilience is the ability to recover from perceived adverse or changing situations through a dynamic process of adaptation, inflcuenced by personal characteristcis, family, and social resources, and mansifested by positive coping, control, and integration. (Caldeira et al., 2016). This has been measured by Child and Youth Resilience Measure-Revised: Jefferies et al. (2018).

Family accommodation: Family accommodation describes changes that family members make to their own behavior, to help their relative who is dealing with psychopathology, and to avoid or alleviate distress related to the disorder. (Albert et al., 2017). This has been measured by Family accommodation scale (FAS): Calvocoressi et al. (1995).

Study intervention:

The study intervention is an integration of pre-established evidence-based treatments with modifications based on literature findings. Following are the interventions which are being used in the study.

Integrative Exposure Response Prevention: The module includes components of Acceptance Commitment Therapy (ACT), Dialectical Behaviour Therapy (DBT), Compassion-focused therapy (CFT), and exposure response prevention. ACT focuses on acknowledging negative thoughts and emotions and not allowing one to be caught up in them (Capel et al., 2022). DBT emphasizes on techniques to tolerate distress (Rathus and Miller., 2002), while compassion-focused therapy aims at internal dialogue to reduce self-criticism (Petrocchi et al., 2021). Exposure-response prevention therapy based on the module by Paul Salkovski involves exposing oneself to a trigger for obsessions and refraining from engaging in usual compulsions (Salkovskis, 1999)

Exposure Response Prevention: Exposure-response prevention therapy based on the module by Paul Salkovski involves exposing oneself to a trigger for obsessions and refraining from engaging in usual compulsions (Salkovskis, 1999).

Completers: In the present study, Completed treatment indicates that the participant has attended at least 80% of the allotted number of sessions. (Anderson & Rees, 2007)

Treatment Dropouts: In the present study, treatment dropouts have been defined as participants who have failed to attend three consecutive sessions or discontinued therapy.

Tentative scheme of chapters of the thesis:

1. State of Art

2. Review of literature

3. Problems to be investigated

4. Objectives

5. Motivation of the Study

6. Hypotheses

7. Research methods and materials

- Venue of the study
- Study Design
- Sampling Method
- Sample
- Inclusion criteria
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8. Procedure for data collection

9. Significance of the study

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Appendices

METHOD AND MATERIALS

Venue of the Study: Erna Hoch Centre for Child and Adolescent Psychiatry, Central Institute of Psychiatry, Ranchi.

Study Design: Hospital based, randomized controlled trial design

Sampling Method: The current study will use purposive sampling. Participants will be allocated into two groups by block randomization.

Sample: Sample size calculation was performed using G*Power 3.1.9.2 software for two groups with 4 time points a priori sample size calculations with effect size (0.25) kept as moderate to good, power as 95% and p-value as 0.05 level of performing repeated measures ANOVA. The total sample size calculated for the current study is 40. The study will comprise 40 children and adolescents (both male and female). These participants will be randomly assigned to two groups (Study Group 1 and Study Group 2), with each participant being assigned a sequential, random number generated through the computer using Microsoft Excel. Study Group 1 will receive Integrative ERP with family psychoeducation and pharmacotherapy, whereas Study Group 2 will receive only ERP with family psychoeducation and pharmacotherapy.

INCLUSION CRITERIA

a) Children and adolescents diagnosed with OCD as per DCR-10 (1993) WHO.

b) Children and adolescents with mild to moderate severity of anxiety and depression as measured by State-Trait Anxiety Inventory for Children (STAIC) and Children's depression inventory (CDI) as used in the study.

c) Children and adolescents between ages 9 to 17 years 11 months.

d) Children and adolescents obtaining Grade III Intellectual Capacity Average (25th Percentile) and above in intelligence quotient test

e) Index adolescent having a primary caregiver with no history or current diagnosis of any mental illness and staying with the child/adolescent

f) Participants who can comprehend Hindi and/or English language.

g) Participants with no history of receiving structured psychotherapeutic intervention in last 6 months.

EXCLUSION CRITERIA

a) Children and adolescents diagnosed with other comorbid psychiatric disorders except for caffeine and nicotine use

b) Children and adolescents diagnosed with severe depression as measured by Children's depression inventory (CDI) or any major physical or neurological disorder.

c) Children and adolescents obtaining less than the 25th percentile on Ravens SPM

d) Index adolescent having a primary caregiver with no history or current diagnosis of any mental illness and staying with the child/adolescent.

e) Participants who had prior exposure to any mode of brain stimulation in last 3 months.

TOOLS

Screening Tool

Standard Progressive Matrices: Ravens 1936

Pre-Post Treatent Measures

1. Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS): Goodman et al. (1989); Scahill et al. (1997)

2. Children and Adolescent Psychological Distress Scale: Stefano et al. (2022)

3. OCD family functioning scale (OFF): Stewart et al. (2011)

4. Children's depression inventory (CDI) Kovacs (1984)

5. State-Trait Anxiety Inventory for Children (STAIC): Spielberger et al. (1973)

6. Child and Youth Resilience Measure-Revised: Jefferies et al. (2018)

7. Family accommodation scale (FAS): Calvocoressi et al. (1995)

8. Coercive disruptive behaviour Scale for paediatric OCD (CD-POC): Lebowitz et al. (2011)

9. Parental Tolerance of Child Distress Scale (PT-OCD): Simons and Gather (2005).

10. Clinical Global Impression Scale: Early Clinical Drug Evaluation Program (ECDEU) (1976)

1. **Informed Consent form**: It requires that the patient and parents understand the purpose, risks, and methodology of the therapeutic process and the research process. For the patient and parents to fully understand, the informed consent document would explain the research's purpose, process, risks, and benefits, while stressing the participant's rights and responsibilities.
2. **Socio-Demographic and Clinical Information Data Sheet**: A semi-structured proforma specially designed for the study will be used to elicit the following sociodemographic information- name, age, sex, religion, and educational level of the subject. Histories of present medical and psychiatric illnesses will be elicited—information related to the duration of symptoms and family-related variables related to obsessive-compulsive disorder.
3. **Standard Progressive Matrices (SPM): Raven, 1936**: It is a screening tool to identify an intellectual disability. The tests consist of 60 items divided into five sets. It can be administered to individuals aged 8-65 years. A score less than Grade III will be the criteria to rule out those with below-average intellectual functioning. Regarding measures of reliability and consistency, split-half method estimates showed values ranging from .60 to .98, while Raven's provided test-retest coefficients for different age groups: .93 (50 years) (Raven, 1936).
4. **Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS): (Goodman et al., 1989; Scahill et al., 1997)**: A psychometrically supported (Lewin & Piacentini, 2010) clinician-administered, semi-structured questionnaire of symptoms and severity of OCD. It enquires about time spent, interference, distress, resistance, and control for both obsessions and compulsions. The scale includes ten items that assess various aspects of OCD severity using a 5-point scale. Total scores range from 0 to 40, with higher scores indicating more severe symptomology. It can be administered to individuals aged 6-17 years. The CY-BOCS has demonstrated good internal consistency (Cronbach's α=0.90), test-retest reliability (intra-class correlation=0.79) and inter-rater reliability (intra-class correlation=0.84).
5. **Children and Adolescent Psychological Distress Scale (CAPDS-10)**: (Stefano et al., 2022). The scale is a structured scale with ten items rated from 1(no) to 3(very), with a cut-

off score of>19. The scale is administered to children and youth aged between 9 to less than 18. The tool is divided into four dimensions: depression (items1-3), anxiety (items 4-6), somatic complaints (item 7), and aggressive behaviour (items 8- 10). The internal consistency of the CAPDS-10 is satisfactory with a Cronbach's alpha =0.86

6. **OCD family functioning scale (OFF) (Stewart et al., 2011): The OFF Scale is a 21-item** measure report measure assessing OCD-related family functioning impairment at current and worst-ever symptom time points. It has complementary patient and relative versions to capture different perspectives of family functioning impairment. The scale contains a seven-factor structure, encompassing three impact factors in Part 1 (overall impairment: routine tasks, socio-occupational/academic, and interference with family). The scale can be administered to ages 7-75. For each item, parents or the child is asked to report on the frequency of OCD- related impairments on a scale ranging from 0 to 3 (0 "never", 1 "monthly", 2 "weekly", 3 "daily"). Item scores are summed to create a total score, with higher total scores indicating greater impairment. The psychometric properties of the OFF scale are reported to be adequate. The OFF Scale has been validated, demonstrating strong test-retest reliability, construct validity, and convergent and divergent validity. The version has four subscales demonstrating good internal consistency: daily living skills, school, social and family (Cronbach's α=0.87; 0.91; 0.93; 0.87).
7. **Children's depression inventory (CDI) (Kovacs, 1984)**: The CDI is a 27-item self-report questionnaire completed by youth aged 7 to 17 years, designed to assess the presence and severity of depressive symptoms within the past two weeks. Responses are completed on a scale from 0 to 2, with higher scores indicating increased severity. Five subscales within the assessment measure different components of depression: anhedonia, ineffectiveness, interpersonal problems, negative mood and negative self-esteem. The CDI is an efficient screener for depressive symptoms in youth and has demonstrated good internal consistency and construct validity. Cronbach's alpha: 0.71- 0.89 and Internal consistency: 0.59-0.68
8. **State-Trait Anxiety Inventory for Children (STAIC) (Spielberger et al., 1973)**: The STAIC is a self-report tool with 40 items tool rated from 1 to 3 points: Trait: 1(hardly ever) to 3 points (often) and State anxiety: 1(no) to 3(very). The test is used for children aged 9 to 18 years. The STAIC has a desirable level of reliability. According to item response theory, all the items of the STAIC were highly discriminating. The results of the confirmatory factor analysis, item response theory, and reliability indicated that the STAIC applies to adolescents (Cronbach's alpha 0.87 and 0.89)

9. **Child and Youth Resilience Measure-Revised (Jefferies et al., 2018)**: The CYRM scale is a 28-item, 2-subscale CYRM-R consisting of intra/interpersonal and caregiver resilience subscales. It is administered to individuals aged 5-23 years. The scoring for the scale ranges from 1 (not at all) to 5 (a lot). The scale is reliable with Cronbach's alpha 0.82 and 0.87.
10. **Family accommodation scale (FAS) (Calvocoressi et al., 1995)**: It is measured by parent report using the 12-item, clinician-report version of the Family Accommodation. Items concern the degree to which family members accommodated a child's obsessive-compulsive symptoms over the last week (8 items) and the level of distress and impairment that family members and the affected child experience as a result of accommodating or not accommodating the child (4 items). The scale can be administered to parents with children ages 8-18. The measure assesses the presence, frequency, and severity of the past week's FA, including the degree to which the family participates in compulsions, the impact of OCD on the family, and modifications of the family routine due to OCD. Items are rated from 0 (No/Not applicable) to 4 (Every day/Extreme), and total scores range from 0-48. These items have been used frequently and have demonstrated good internal consistency, convergent validity, and treatment sensitivity. FAS has demonstrated good inter-rater reliability (intra-class correlation range of 0.75–0.99) and good internal consistency (Cronbach's α=0.82)
11. **Coercive Disruptive Behaviour Scale for Paediatric OCD: (Lebowitz et al.,2011)** Coercive Disruptive Behaviour Scale for Paediatric OCD (CD-POC), an 18-item parent-report measure which evaluates coercive behaviours common in OCD. Items are rated on a five-point Likert scale ranging from 0 ("never typical of my child") to 4 ("almost always typical of my child"). Items are summed to create a total score, with higher scores indicating greater levels of CDBs. The internal consistency is high (Cronbach's α=0.871)
12. **Parental Tolerance of Child Distress Scale (PT-OCD)**: **Simons and Gather (2005)**. The scale measures parents' ability to tolerate their child's distress. It is a parent self-report and adapted from the distress tolerance scale. The scale shows good discriminant validity and test-retest reliability over a 6-month interval (r = 0.61). The 15 items are rated on a 1= Strongly Agree to Disagree scale and 5=Strongly. Higher scores denote a more remarkable ability to tolerate the child's distress.
13. **Clinical Global Impression Scale**:

    Early Clinical Drug Evaluation Program (ECDEU) (1976). Severity (CGI-S) and Improvement (CGI-I) The CGI-S is a 7-point clinician assessment of the severity of current OCD symptoms from 0 (No illness) to 6 (Extremely severe symptoms); a score of 3

indicates moderate symptoms. The CGI-I similarly rates treatment improvement from 0 (Very much worse) to 6 (Very much improved). Treatment responder status is defined by CGI-I scores of “much” or “very much improved” (≥5). The Interrater reliability of the scale is 0.51-0.66

PROCEDURE FOR DATA COLLECTION:

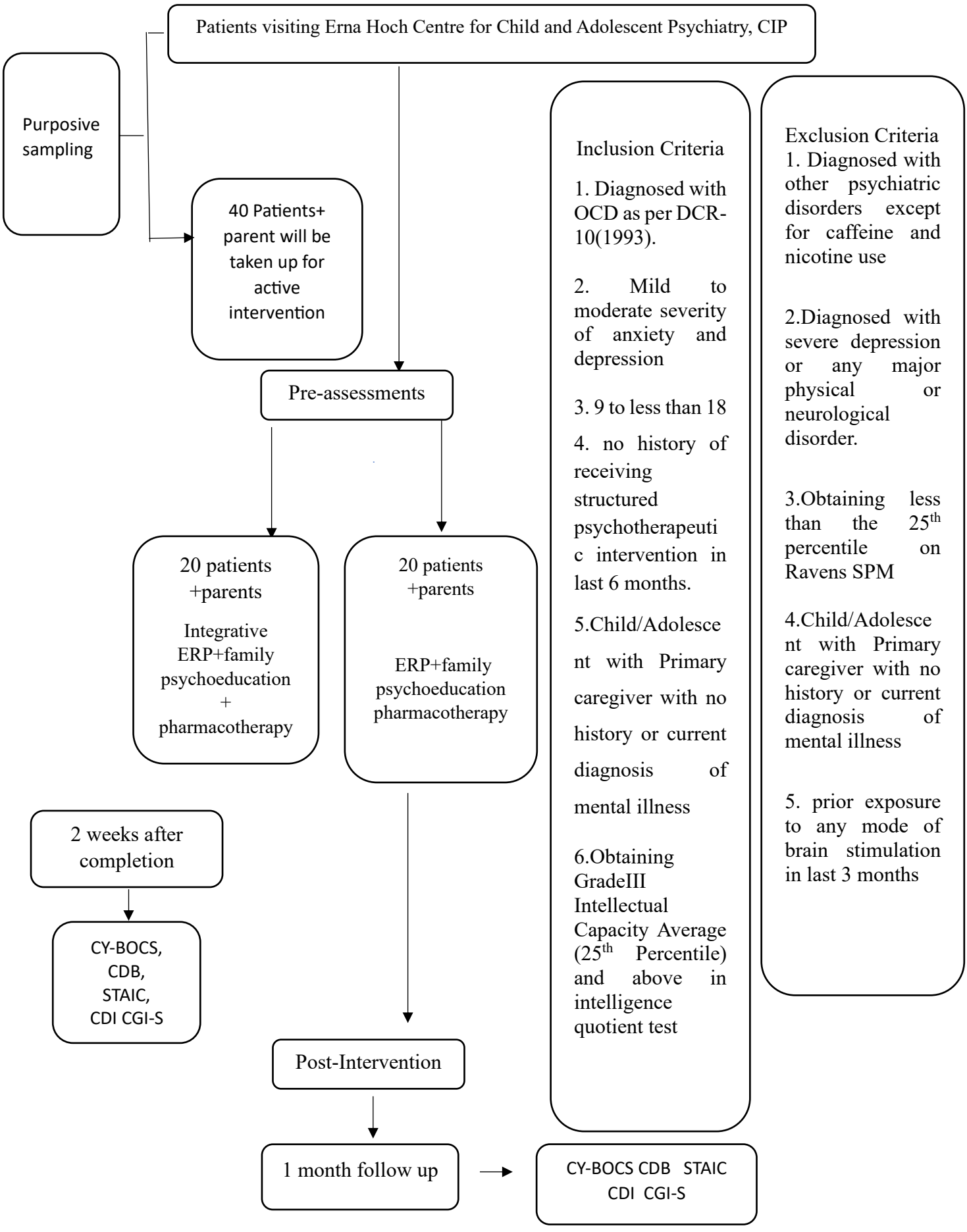
Phase I: Development of the Intervention Programme

The study intervention is an integration of pre-established evidence-based treatments with modifications based on literature findings. Following are the interventions which are being used in the study.

The module includes components of Acceptance Commitment Therapy (ACT), Dialectical Behaviour Therapy (DBT), Compassion-focused therapy (CFT), and exposure response prevention. ACT focuses on acknowledging negative thoughts and emotions and not allowing one to be caught up in them (Capel et al., 2022). DBT emphasizes on techniques to tolerate distress (Rathus and Miller., 2002), while compassion-focused therapy aims at internal dialogue to reduce self-criticism (Petrocchi et al., 2021). Exposure-response prevention therapy based on the module by Paul Salkovski involves exposing oneself to a trigger for obsessions and refraining from engaging in usual compulsions (Salkovskis, 1999)

Phase II. Assessing the efficacy of the Intervention Programme

All the participants fulfilling the inclusion and exclusion criteria will be evaluated on the sociodemographic data sheet. Study Group 1 will receive Integrative ERP with family psychoeducation and pharmacotherapy, whereas Study Group 2 will receive only ERP with family psychoeducation and pharmacotherapy. All the participants will be evaluated at baseline, two weeks, four weeks and one-month follow-up of therapy on primary variables of severity of OCD, the severity of coercive disruptive behaviour, anxiety, depression, and clinical global impression scale. The participants will be evaluated at baseline and treatment completion on variables of family accommodation, coercive disruptive behaviour, parental tolerance, child and adolescent distress, resilience, and family functioning.


Patients visiting Erna Hoch Centre for Child and Adolescent Psychiatry, CIP
Purposive sampling
40 Patients+ parent will be taken up for active intervention
Pre-assessments
20 patients +parents
Integrative ERP+family psychoeducation + pharmacotherapy
20 patients +parents
ERP+family psychoeducation pharmacotherapy
2 weeks after completion
CY-BOCS, CDB, STAIC, CDI CGI-S
Post-Intervention
1 month follow up
CY-BOCS CDB STAIC CDI CGI-S
Inclusion Criteria
1. Diagnosed with OCD as per DCR-10(1993).
2. Mild to moderate severity of anxiety and depression
3. 9 to less than 18
4. no history of receiving structured psychotherapeutic intervention in last 6 months.
5.Child/Adolescent with Primary caregiver with no history or current diagnosis of mental illness
6.Obtaining GradeIII Intellectual Capacity Average (25th Percentile) and above in intelligence quotient test
Exclusion Criteria
1. Diagnosed with other psychiatric disorders except for caffeine and nicotine use
2.Diagnosed with severe depression or any major physical or neurological disorder.
3.Obtaining less than the 25th percentile on Ravens SPM
4.Child/Adolescent with Primary caregiver with no history or current diagnosis of mental illness
5. prior exposure to any mode of brain stimulation in last 3 months

Proposed Intervention

The study intervention is an integration of pre-established evidence-based treatments with modifications based on literature findings.

INTERVENTION STRUCTURE:

Baseline assessment: 2 sessions

Immediate post-assessment: 1 session

Total number of sessions: 13

Duration of each session:60-90 minutes; Frequency :3/week (ERP and resilience building sessions)

Components addressed: The session components have been derived based on the literature review of areas of impact of psychological disorders and empirical-based techniques.

Table 1: Integrative ERP Module

Phase	Sessions	Technique	Content/Description of the session
I	2	Orientation, rapport establishment, Pre-intervention assessment	Establishing rapport and explaining the process of therapy Administering the pre-intervention assessment tools on the patients to establish baseline measures of study variables
I	1	Psychoeducation: Normalization, Description of OCD and its manifestation and role of resilient factors in OCD	Psycho-educate on coercive behaviour and its manifestation. Normalise the disorder Appraisal of obsession and role of neutralising and avoidance Treatment Rationale Externalising OCD to cultivate motivation and detachment for ERP Cycle of OCD Psychoeducation on the role of resilience Need for resilience building

II	8	Exposure Response Prevention and resilience building (self-compassion, optimism, competence, acceptance, emotional stability)	Building a life worth living Ways to increase positive emotions (Pleasurable activities, Life values and goals, emotional regulation) Observing and describing thoughts, self as a context: observer self-exercise Promote active, mindful acceptance and meaning in life. Fear thermometer to rate the level of distress or avoidance Recording of control strategies measuring frequency, distress, intensity or urge to engage, intensity or effort to control Educate on leaning into anxiety
III	2	Termination and postintervention	Consolidate the gains in therapy. Anticipate challenges Understanding of goal setting and how to overcome OCD Administering the assessment tools on the individuals to establish post-therapy changes in measures of study variables

TABLE 2: Exposure Response Prevention Module

Baseline assessment: 2 sessions

Immediate post-assessment: 1 session

Total number of sessions: 13

Duration of each session:60-90 minutes; Frequency :3/week (ERP sessions)

Components addressed: The session components have been derived based on the literature review of areas of impact of psychological disorders and empirical-based techniques.

Phase	**Sessions**	**Technique**	**Content/Description of the session**
I	2	Orientation, rapport establishment,	Establishing rapport and explaining the process of therapy Administering the pre-intervention assessment tools on the patients to establish baseline measures of study variables

		Pre-intervention assessment	
I	1	Psychoeducation: Normalization, Description of OCD and its manifestation	Psycho-educate on coercive behaviour and its manifestation Appraisal of obsession and role of neutralising and avoidance Treatment Rationale Cycle of OCD Externalising OCD to cultivate motivation and detachment for ERP
II	8	Exposure Response Prevention	Fear thermometer to rate the level of distress or avoidance Recording of control strategies measuring frequency, distress, intensity or urge to engage, intensity or effort to control Educate on leaning into anxiety
III	2	Termination and post-intervention	Consolidate the gains in therapy Anticipate challenges Understanding of goal setting and how to overcome OCD Administering the assessment tools on the individuals to establish post-therapy changes in measures of study variables

Table 3: Family Psychoeducation Module

STRUCTURE OF INTERVENTION:

Baseline assessment: 1 session

Immediate post-assessment: 1 session

Total number of sessions: 4

Duration of each session:60-90 minutes

Components addressed: The session components have been derived based on a literature review of areas of impact of psychological disorders and empirical-based techniques.

Phase	**No. of session**	**Technique**	**Content/Description of the session**
I	1	Orientation and Rapport Establishment	Establishing rapport and explaining the process of therapy
I	1	Pre-intervention assessments	Administering the pre-intervention assessment tools on the patients to establish baseline measures of study variables
II	1	Psychoeducation	• Adherence to medications • Disengagement from accommodating the coercive demands of the child
III	1	Relapse prevention and post-intervention assessments	• Familiarize with the signs of relapse • Post-intervention to measure post-therapy changes

SIGNIFICANCE OF THE STUDY

Obsessive-compulsive disorder (OCD) is a debilitating condition which is common across childhood, adolescence, and adulthood (Ruscio et al., 2010). The challenges in diagnosing and treating OCD in children, given the secrecy and poor insight in this group, make it more relevant for studies across sociocultural contexts (Kessler et al., 2005). The disorder, characterised by obsessions and compulsions, tends to interfere with the person's quality of life from a mild to severe degree. Given the prevailing burden and impact of OCD in children and

adolescents, effective interventions must be identified and implemented. Phillip et al.2021 in his study concluded that ACT produces a considerable reduction in the severity of symptoms in OCD and is as effective as a combination of CBT when used in conjunction with selective serotonin reuptake inhibitors (SSRI) (Phillip et al., 2021). Hashemi et al., 2014 indicated that cognitive emotion regulation strategies aided in the regulation of emotions due to the presence of obsessive thoughts and compulsions. A collaborative integration in the current module has significance in enhancing the resilience of individuals with obsessive-compulsive disorder. The study aims to provide an opportunity for more open-ended care, assessing the efficacy of integrative exposure response prevention-based comprehensive techniques not only in reducing coercive disruptive behaviour in OCD but also in enhancing social and academic functioning and building resilience.

RELEVANCE TO THE PRESENT-DAY PROBLEM AND NEED FOR THE SOCIETY

Epidemiological studies have indicated that obsessive-compulsive disorder is a chronic illness affecting about 1-3% of the general population and persists for years. In India, the lifetime prevalence is around 1-4% (Ruscio et al., 2010; Gururaj et al., 2008). Research states that CDB is a common occurrence among youth with OCD, estimating that coercive behaviour occurs in at least 25% of paediatric cases with OCD (Lebowitz et al., 2011).

Cognitive behaviour Therapy with Exposure Response Prevention is an evidence-based and one of the frontline treatments for OCD. Despite the benefits, many youths maintain residual symptoms and functional impairments at treatment completion (Barret et al., 2008; Storch et al., 2008.) Although current forms of treatment are available for the treatment of coercive behaviour in obsessive-compulsive disorder, there is a presence of high rates of dropout and even financial limitations. Short-term therapy is required to meet the group's needs, especially for individuals with scarce monetary resources. It also minimises the chance of therapy ending prematurely. The integrative treatment for children with coercive behaviour in obsessive-compulsive disorder includes building resilience in children to cultivate motivation and detachment for exposure response prevention and an overall reduction in symptoms.

INTERIM STATISTICAL ANALYSIS: The statistical procedure will be completed using Statistical Package for Social Sciences (SPSS) version 25.0. The demographic and other variables will be analysed using descriptive statistics—repeated measures ANOVA will be used to assess the longitudinal and cross-sectional differences between the groups. The analysis will aid in measuring the changes in the variables post-intervention following the therapy compared

to the pre-intervention assessment. Appropriate correlations shall be made to assess the relationship between the variables. Further statistical analyses will be done accordingly, as this is an interim plan.

CONTRIBUTION TO EXISTING KNOWLEDGE:

The literature review focuses on traditional CBT as an "antecedent-focused" and aims to change the nature of obsessive thought. However, another psychological treatment ACT is "response", emphasising the changing relationship between an obsessive thought and the ensuing emotional state (Philip et al., 2021). Cognitive emotion regulation strategies and self-compassion are also known to change the nature of the disorder and ultimately reduce the symptoms. However, there is no comprehensive model for the treatment of children and adolescents with OCD. Based on a comprehensive literature review of coercive disruptive disorder in children and adolescents with obsessive-compulsive disorders, the current study attempts to integrate verbal therapies to work on comprehensive recovery outcomes. The aim is to integrate third-wave therapies with exposure response prevention, considering adolescents' current socio-emotional and cognitive developmental levels.

FUTURE WORK

The comprehensive model developed for obsessive-compulsive disorder appears to have several potential advantages over traditional behavioural and pharmacological treatment approaches as it is an integrated therapy that draws from acceptance commitment therapy (ACT), Dialectical Behaviour Therapy (DBT), compassion focussed therapy (CFT) and exposure response prevention (ERP). The role of therapy and its efficacy in long-term maintenance, global improvement, and symptom reduction may be investigated in the future. The efficacy of the disorder can also be assessed in relation to other internalising disorders.

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